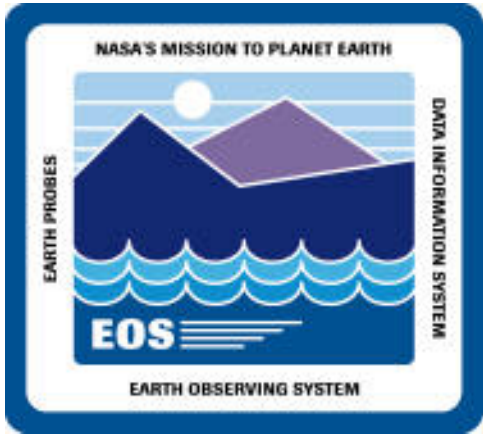

Subscription Drill-Down

Michael Burnett

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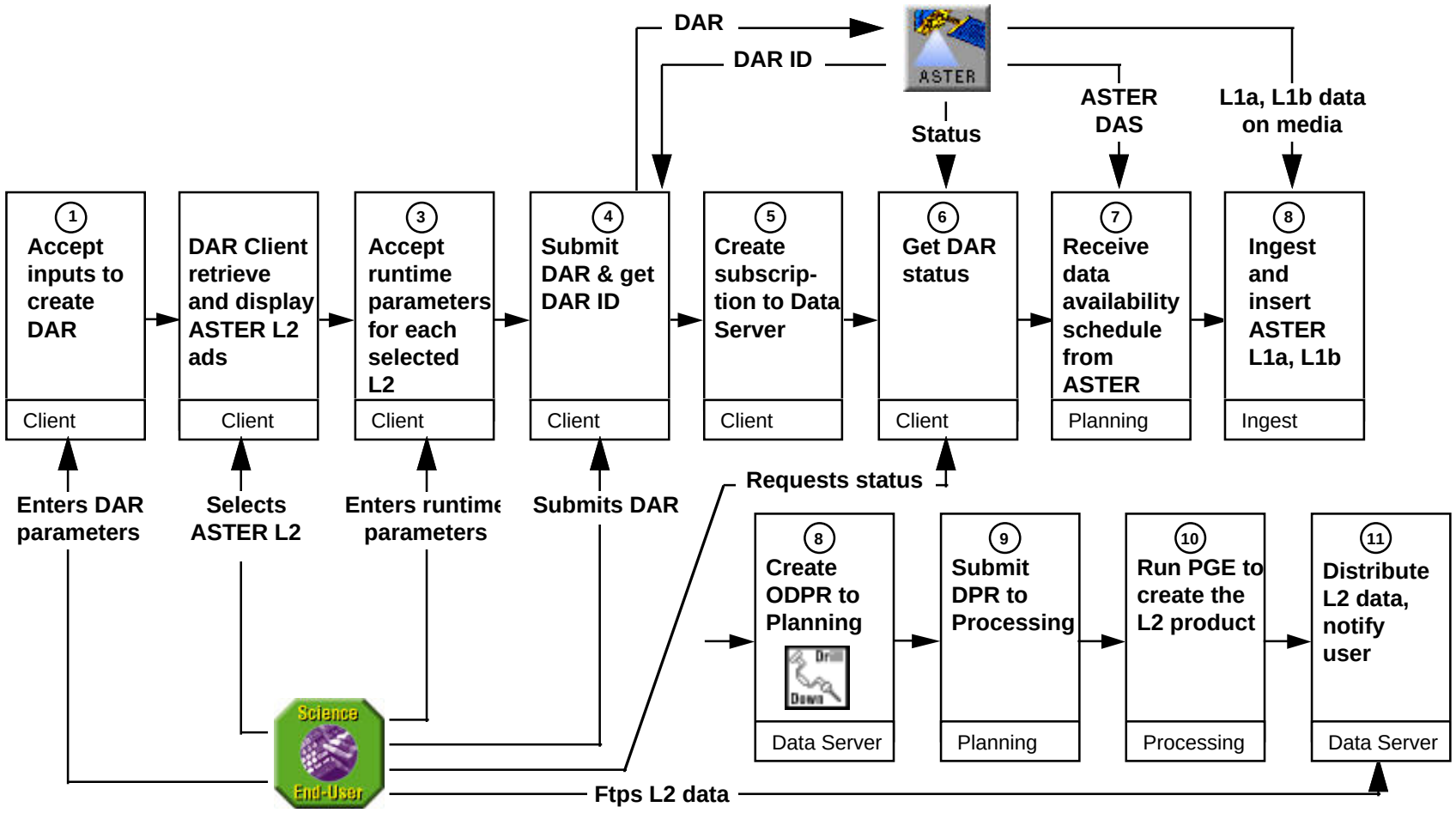
1 November 1995

DAR Scenario

Functional Flow



Overview

Subscriptions

- High level summary of critical design component
- Allows ECS to support clients desire to have actions taken based on the occurrence of future events
- Much more than presented here (Ref. 305-CD-024-001)

ECS Subscription Users

- Data Server
- Advertising Server
- Planning

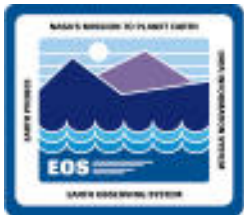
Scenario Context

- DAR support
- Recovery of a Disconnected Session
- QA

Examples of Events:

- Science Granule Insertion
- Metadata Update
- New Advertisement
- New Metadata Problem Report

Design Drivers



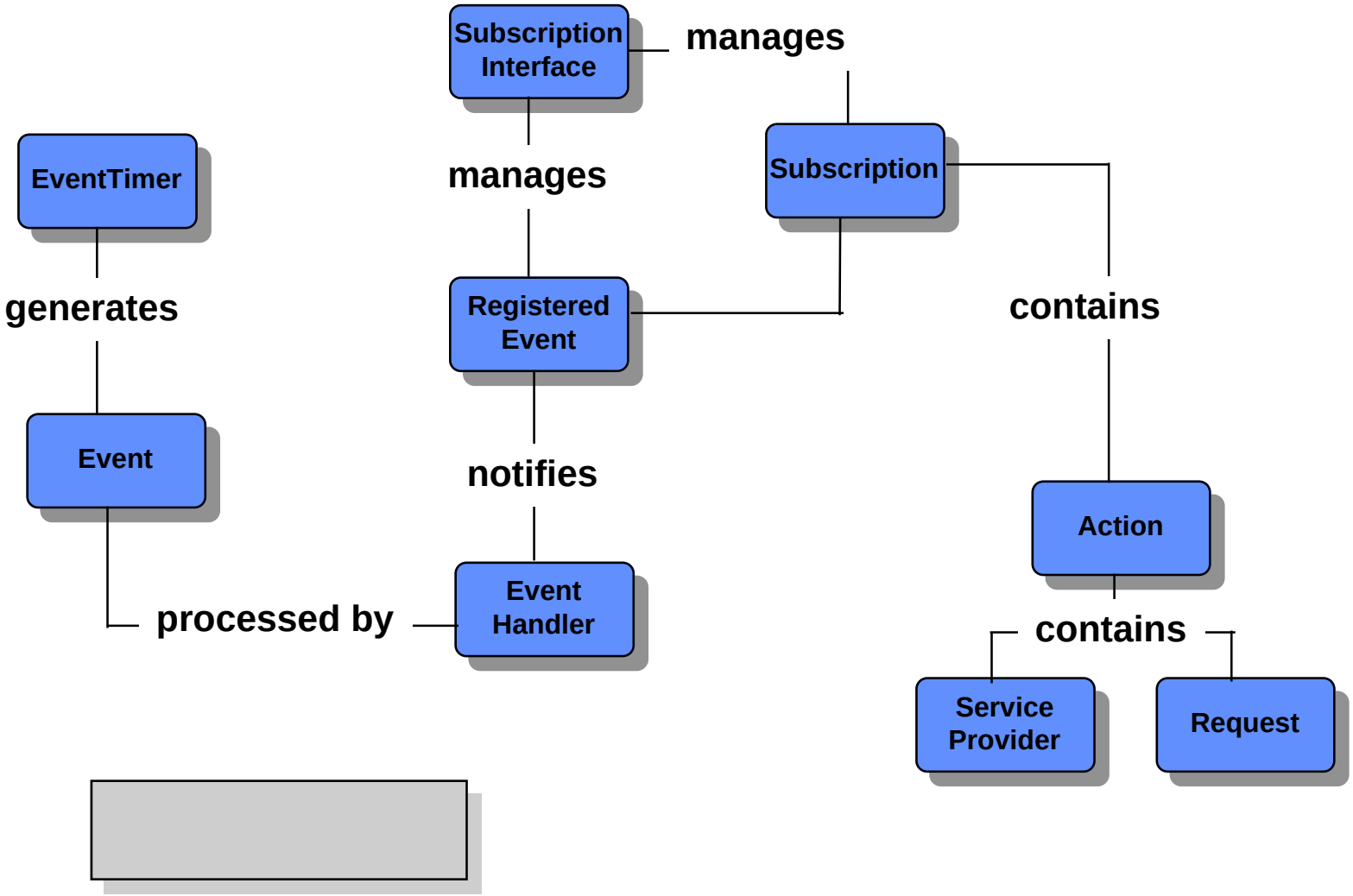
Architectural Drivers

- Need for a common mechanism across subsystems
- Generic Event-Action Model
- Extensibility: allow run-time changes to events and actions

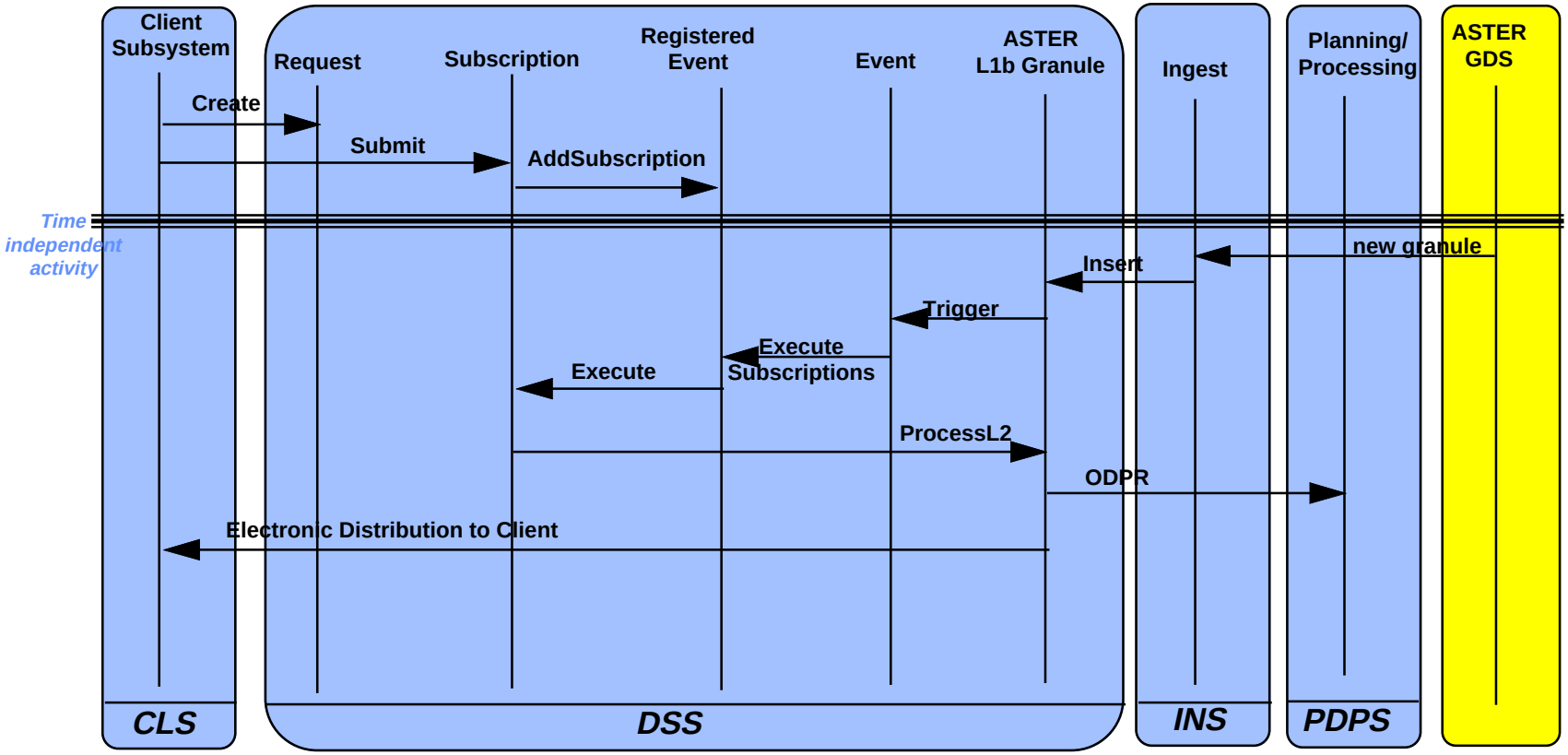
New Release B Features

- Migration of Data Server Subscription Model
  - Broader range of actions
  - Complete separation of client, event source and service provider
- Timed events
- Modifying subscriptions

Software Design – High Level Class Model

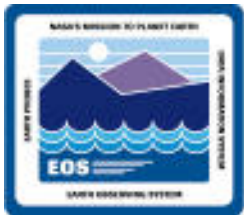


Software Design –
DAR Event Trace (High Level)



For details, reference:
305-CD-024-001

Evolutionary Features



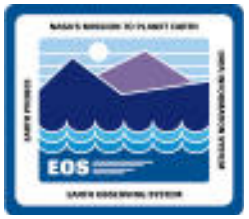
Potential Future Enhancements

- Qualifiers (pro's and con's)

Scalability

- Vertical Scaling
  - Host Processing power
  - Host Storage availability
- Horizontal scaling
  - Generic model separates the events from the service provider
  - Subscribable Events are advertised - Service Location transparency
  - No required coupling for event source to an instance of the subscription server
    (a single data server may use multiple subscription servers)

Current Status



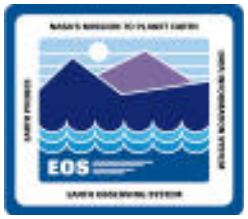
Prototypes

- Qualifier Research

Next Steps

- Bundling of Notifications

Summary



Subscription Highlights

- Generic Model supporting client activities based on occurrence of future events
- Common model available to entire ECS system
- Extremely flexible
- Extremely extensible
- Extremely scalable